Stefanie Tellex

Week 6

Rich, C.; Sidner, C.; Lesh, N.; Garland, A.; Booth, S.; Chimani, M., "DiamondHelp: A Collaborative Interface Framework for Networked Home Appliances",

This is a cool idea, although it reminds me of Clippy. In some sense it feels like "make a complicated, hard to understand gui, and throw a character on top to clean up the mess" rather than investing in a clean gui to begin with. The screen shots themselves look like excerpts from "wizards" or tutorials.

I think the "chat" might be frustrating because the user has a limited number of things they can say. If they don't want any of the things in the interface, it becomes an obstacle rather than a helpful feature.

Some Microsoft wizards or troubleshooters are like this. As they go through the tutorial, there will be buttons that bring up various Windows control panels, and instructions in the tutorial for how to change them. So similarly to diamond, there's the "instructions" and the live application gui available at the same time.

The scrolling behavior sounds obnoxious. If it gives you long instructions you'll have to manually scroll back to read them, rather than using an automatic pager.

What's the difference between "Never mind" and "Oops"? They explain it but it's not clear from the UI.

G. Hoffman and C. Breazeal (2004). "Collaboration in Human-Robot Teams."

This paper had no evaluation. It's listed in future work, but I think it's important for this sort of work to have some sort of test.

Also, the task was extremely simple. I understand why, and I suppose you've thought about ways to make it more complicated. But it's a pretty big leap from pushing buttons to working on spacecraft. Maybe there's some children's game or something? Peek-a-boo? Or reading a book together? Or maybe if part of it were in a virtual world. I think it's probably important to use the physical robot to test body language but maybe both robot and human could be looking at the same computer screen, and both can manipulate it. Maybe a puzzle?

B. Gross (1996). "Collaborative Systems: the1994 AAAI Presidential Address,"

This is a paper I'd expect us to read at the beginning of the term. It's an easy read, and it's easy to agree with it because it's so high level. I liked the analogy of collaborating to build blocks.

P. Cohen (1991). "Teamwork,"

This sort of reminds me of Trivver's work on how altruism evolves.
http://plato.stanford.edu/entries/altruism-biological/#3

For biological altruism to evolve, individuals must interact more than once over their lifetime, and they must be able to recognize individuals. Then, it makes sense for one animal to do a favor for another animal if they expect that animal to return the favor at some point in the future. They must recognize individuals so they can detect "cheaters" who receive favors but fail to return them, and they must interact more than once so there's an opportunity to return the favor.

Then they always talk about Tit for Tat and the iterated Prisoner's Dilemma. Tit for Tat is in some sense the most primitive form of collaboration. (Or maybe "always cooperate", but that's less appealing because it isn't a successful strategy.) It would be interesting to try to formalize collaboration using Tit for Tat as a base.